

REMARKS

In the Final Action dated May 1, 2008, claims 1-22, 25, 69 and 71-89 are pending and under consideration. Claims 1-22, 25 and 88-89 are allowed. Claims 69, 71-81 and 83-87 are rejected under §103(a) as obvious over Esenaliev (U.S. Patent 6,165,440) in view of Patel (US 2005/0180917 A1). Claim 82 is objected to as dependent from a rejected base claim (claim 81), but would be allowable if rewritten as an independent claim.

The Examiner admits that Esenaliev fails to disclose a particular concentration of metal to be achieved within the tissue treated. However, the Examiner contends that Patel teaches the treatment of cancer at the site of, and area adjacent to, the tumor via irradiation of the diseased tissue. Referring to paragraph 0042 of Patel, the Examiner alleges that Patel teaches nanoparticles comprising a metal, such as gold, at a concentration of about 0.1% by weight. Therefore, the Examiner concludes that it would have been obvious to incorporate a metal concentration as suggested by Patel, to the composition of a nanoparticle as taught by Esenaliev, such that the susceptibility of a tumor to radiation is enhanced.

Applicants previously asserted that Patel discloses neutron capture therapy and isotopes in the form of micro- or nano-particles useful for this therapy, wherein the isotopes can be selected from ^{10}B , ^6Li , ^{22}Na , ^{22}Co , ^{123}Co , ^{126}I , ^{135}Xe , $^{148\text{m}}\text{Pm}$, ^{149}Sm , ^{153}Eu , ^{155}Gd , ^{157}Gd ,(See Paragraph [0036]). Patel also discloses that the nanoparticles containing the active isotope(s) listed above may also contain small amounts of additional metals, such as V, Mn,...gold (Au)(See Paragraph [0042]). It is the concentration of these additional metals in the nanoparticles that Patel is referring to, i.e., these additional metals can be present in the nanoparticle "at a concentration of about 0.0001% wt/wt to about 0.1% wt/wt"(See Paragraph [0042]). Applicants respectfully submit that this percentage in Patel clearly refers to

the concentration of the metal elements in the nanoparticles (composed mainly of active neutron absorbers). Patel does not disclose anywhere a percentage of metal in the target tissue.

In this regard, the previous version of independent claim 69 recites "said metal nanoparticles are administered to said animal in an amount to achieve a concentration in said tissue or said population of cells in the animal of at least 0.1% metal by weight". The Examiner has stated in the Final Action that claim 69 previously presented could also mean the concentration of the metal in the nanoparticle, which resides in the tissue.

Applicants respectfully submit that the Examiner's interpretation of the language of claim 69 relating to the concentration is erroneous. A telephone interview was conducted on August 25, 2008 between the undersigned attorney, Examiner Hopkins and Supervisory Examiner Marmor. Applicants would like to take this opportunity to thank both Examiners for the courtesy and helpful discussion during the interview.

During the interview, the Examiners agreed that Patel does not teach anywhere a concentration of metal or of nanoparticles within a target tissue. The Examiners indicated that if claim 69 is amended to clarify that the recited concentration refers to the concentration of the relevant material in the tissue, rather than the concentration of metal in the nanoparticles, such amendment would overcome the rejection.

Although Applicants believe that the language of claim 69 is clear without any amendment, in an effort to favorably advance prosecution, Applicants have amended claim 69 to recite "wherein said metal nanoparticles are administered to said animal in an amount to achieve a concentration of metal in said tissue or said population of cells in the animal of at least 0.1% ~~metal~~ by weight". As amended, there is no ambiguity that the concentration of "0.1%" refers to the concentration of metal in said tissue or said population of cells in the

animal. Because Patel merely teaches a concentration of metal within the nanoparticles, Patel does not provide a basis to be combined with Esenaliev in order to render claim 69 obvious.

Claims 71-81 and 83-87 all depend from claim 69 and are therefore patentable as well over the combination of Esenaliev and Patel.

Accordingly, it is respectfully submitted that the rejection of 69, 71-81 and 83-86 under 35 U.S.C. §103(a) as allegedly obvious in view of Esenaliev in combination with Patel is overcome. Withdrawal of the rejection is respectfully requested.

It is further respectfully submitted that the instant amendment simply clarifies the claim language of claim 69, and does not introduce any new issue or require additional search by the Examiner, and in any event, places the claims in a better condition for appeal. Therefore, the instant amendment should be entered, which was agreed upon by the Examiners during the telephone interview.

In view of the foregoing amendments and remarks, it is firmly believed that the subject application is in condition for allowance, which action is earnestly solicited.

Respectfully submitted,



Xiaochun Zhu

Registration No. 56, 311

Scully, Scott, Murphy & Presser, P.C.
400 Garden City Plaza-Suite 300
Garden City, New York 11530
(516) 742-4343
XZ:ab